

REMARKS

Claims 47-56 and 118-121 are pending in the present application. Claims 47, 119, and 120 have been amended. The amendments do not add new matter and find support throughout the specification and claims. In particular, the amendments are supported in the specification at least at page 79, lines 7-16. In view of the amendments and following remarks, reconsideration and allowance of the present application is respectfully requested.

Claims 47-49, 51-54, and 118-120 stand rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,006,363 to Fujii et al. (hereinafter Fujii). Applicants respectfully traverse.

Claim 47 relates to a vapor phase growth method of a metal oxide dielectric film on a substrate by a thermal CVD method using organometal gases. The method of claim 1 includes carrying out film formation by introducing the organometal gases and an oxidizing gas into a vacuum chamber through separate introduction inlets while heating the substrate set in the vacuum chamber and keeping the total pressure of the vacuum chamber at 1×10^{-2} Torr or lower. In amended claim 1, the oxidizing gas is nitrogen dioxide (NO₂), oxygen (O₂), or ozone (O₃).

The Office Action asserts that figure 2 and the accompanying description of Fujii discloses the method of claim 47. The amendment to claim 47 provides that the oxidizing gas is nitrogen dioxide (NO₂), oxygen (O₂), or ozone (O₃). It is respectfully submitted that Fujii does not identically disclose or suggest this feature, and therefore claim 47 and its dependent claims are allowable over this reference.

Claims 48, 49, 51-54, and 118 ultimately depend from claim 47 and are therefore allowable for at least the same reasons as claim 47 is allowable.

Claims 119 and 120 have been amended to include the feature that the oxidizing gas is nitrogen dioxide (NO₂), oxygen (O₂), or ozone (O₃), and therefore these claims are also allowable for the same reasons discussed above in regard to claim 47.

Claims 50 and 55 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii in view of United States Patent No. 5,618,761 to Eguchi et al. (hereinafter Eguchi) and United States Patent No. 6,211,035 to Moise et al. (hereinafter Moise). Applicants respectfully traverse.

Applicants have argued in previous amendments (filed on September 17, 2003, July 28, 2004, and October 20, 2004) that Moise is not prior art with respect to the present application. This argument has not been responded to by the Examiner, and is therefore repeated below.

Applicants respectfully note that the present application is a U.S. national stage application filed in accordance with 35 U.S.C. §371 of International Application No. PCT/JP99/04145, which has an international filing date of August 2, 1999. The international application properly claims priority to the following priority applications: Japanese Patent Application Nos. 10/219183, 10/219184 and 10/219187, each filed on August 3, 1998. In the present national stage application, in addition to the right of priority to which Applicants are entitled under 35 U.S.C. §365, the present national stage application includes a claim for priority under 35 U.S.C. §119(a) to the same Japanese priority applications. According to M.P.E.P. §1893.03(c), “[i]f the 35 U.S.C. §119(a) and 35 U.S.C. §365(b) priority claim is to an application, the priority of which

was properly claimed in the international application, the claim for priority is acknowledged” Since the priority applications were properly claimed in the international application, and since verified English translations of the Japanese priority documents were enclosed with the amendment filed on September 17, 2003, it is respectfully submitted that present U.S. national stage application is entitled to an effective filing date of August 3, 1998, based on the priority date of the aforementioned international and Japanese priority applications.

It is respectfully noted that the filing date of Moise is September 9, 1999. However, Moise claims priority to Provisional Application No. 60/123,687, filed March 10, 1999, Provisional Application No. 60/114,228, filed December 30, 1998, Provisional Application No. 60/099,848, filed September 11, 1998, and Provisional Application No. 60/099,571, filed September 9, 1998. Even assuming that all of the claims of Moise are entitled to the filing date of the earliest filed provisional application (i.e., September 9, 1998), even the earliest effective filing date of Moise is after the effective filing date of the present application (i.e., August 3, 1998). Therefore, since even the earliest effective filing date of Moise is after the effective filing date of the present application, it is respectfully submitted that Moise does not qualify as prior art to the present application, and, therefore, cannot be used, either alone or in combination with any other reference, to reject the claims of the present application.

Therefore, since the rejections of claims 50 and 55 are based in part on Moise, which is not a valid reference, as discussed above, the rejections should be withdrawn.

Claim 56 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii in view of United States Patent No. 5,776,254 to Yunki et al. (hereinafter Yunki). Applicants respectfully traverse.

Claim 56 depends from claim 47. The addition of Yunki fails to cure the critical deficiency discussed above with respect to Fujii as applied against claim 47, and therefore, claim 56 is allowable for at least the same reasons as claim 47 is allowable.

Claims 121 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Fujii in view of Yunki. Applicants respectfully traverse.

Claim 121 relates to a vapor phase growth method of a metal oxide dielectric film. The method of claim 121 includes forming the metal oxide dielectric film on a substrate by introducing organometal gases and an oxidizing gas into a vacuum chamber through separate introduction inlets while heating the substrate set in the vacuum chamber. According to claim 121, the temperature of the inner walls of the vacuum chamber is equal to or higher than a temperature to allow the organometal gases to have a sufficiently high vapor pressure and equal to or lower than an organometal gas decomposition temperature, and the total pressure of the vacuum chamber is kept at 1×10^{-2} Torr or lower during formation of the metal oxide dielectric film on the substrate.

The Office Action admits that Fujii does not disclose the feature of the temperature of the inner walls as recited in claim 121. The Examiner asserts that Yunki discloses this feature. (Office Action; page 6, lines 15-17). Additionally, the Examiner apparently recognizes that Yunki does not disclose the specific temperature range specified in claim 121, but counters that the precise temperature is obvious and not patentable. (Office Action; page 6, lines 17-23). However, Yunki apparently discloses a

thermostatic box, the purpose of which is apparently maintaining a uniform temperature or improving efficiency. (Yunki; abstract and col. 13, lines 17-27). There is no discussion in Yunki relating to a temperature of the inner walls of the vacuum chamber being equal to or higher than a temperature to allow the organometal gases to have a sufficiently high vapor pressure, or any disclosure relating to the temperature of the walls being equal to or lower than an organometal gas decomposition temperature. The Examiner asserts that the precise temperature is within experimental range. However, there is no discussion in Yunki, or any of the other references, concerning a basis for the determining an appropriate or ideal temperature. Yunki is apparently only concerned with uniformity of temperature and energy efficiency. Therefore, Yunki gives no clue as to the basis for experimentation that the Examiner asserts is within the range of obviousness. Since Yunki gives no hint as to a temperature of an inner wall as recited in claim 121, and gives no suggestion as to the criteria for determining such a temperature, the combination of the references does not disclose, or suggest, all of the features of claim 121. Therefore, the rejection of claim 121 should be withdrawn.

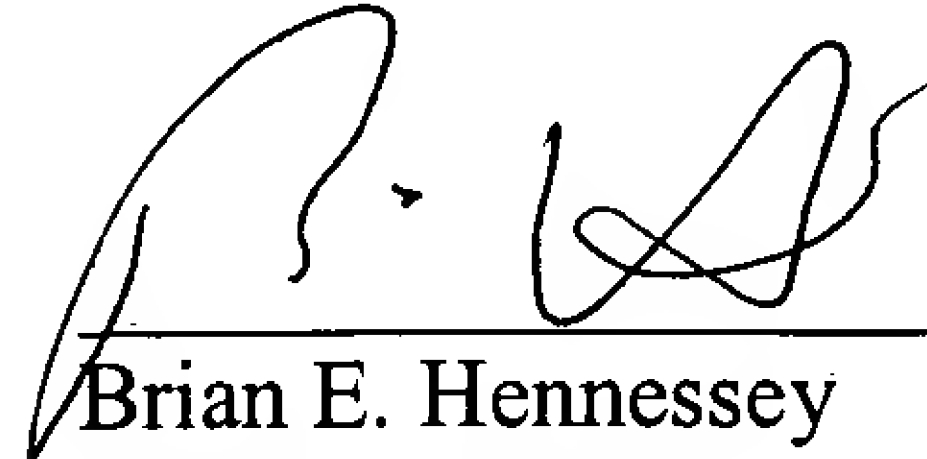
CONCLUSION

In view of the remarks set forth above, Applicants respectfully submit that the present application is in condition for allowance. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Appl. No. 09/744,701

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,



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